Fig. 1

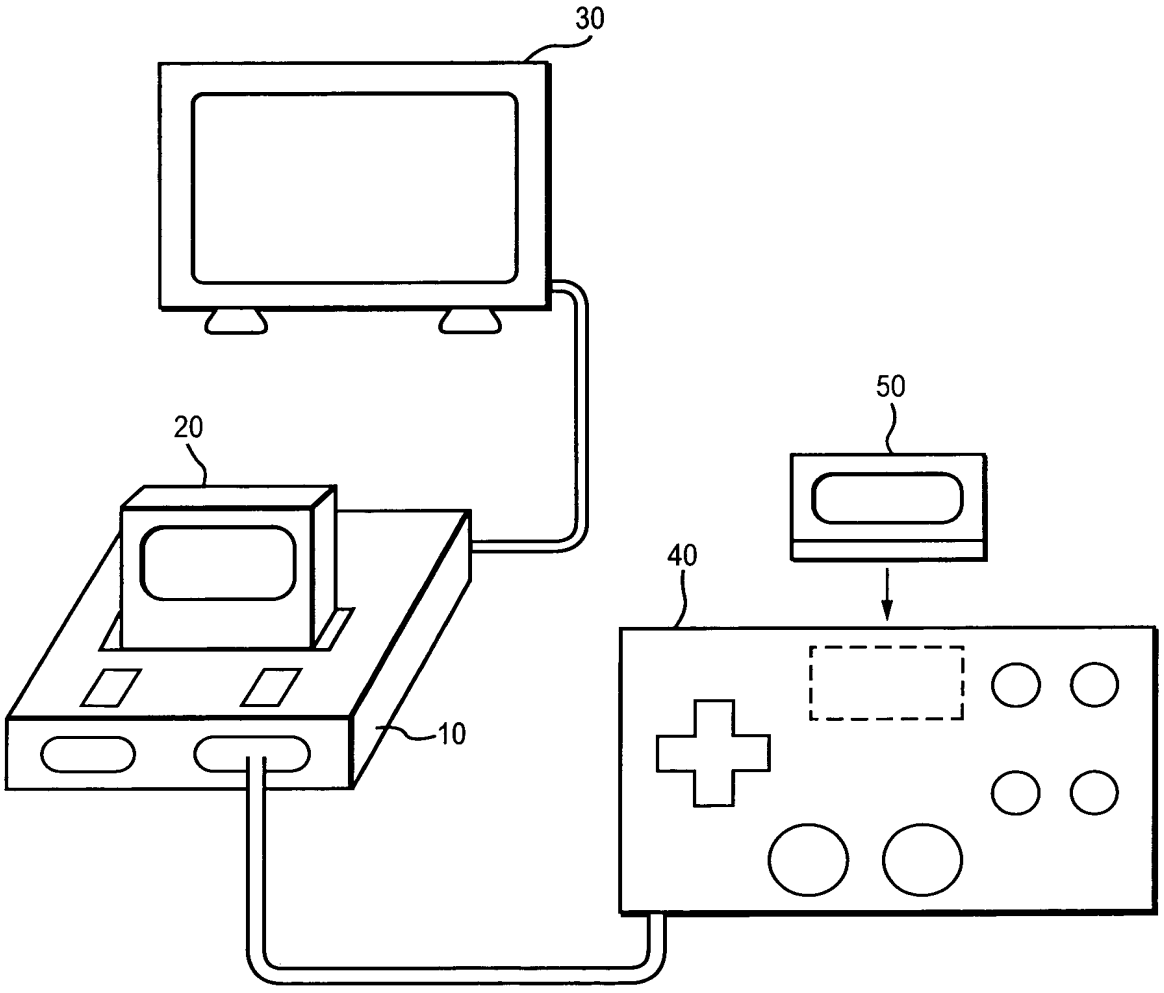


Fig. 2

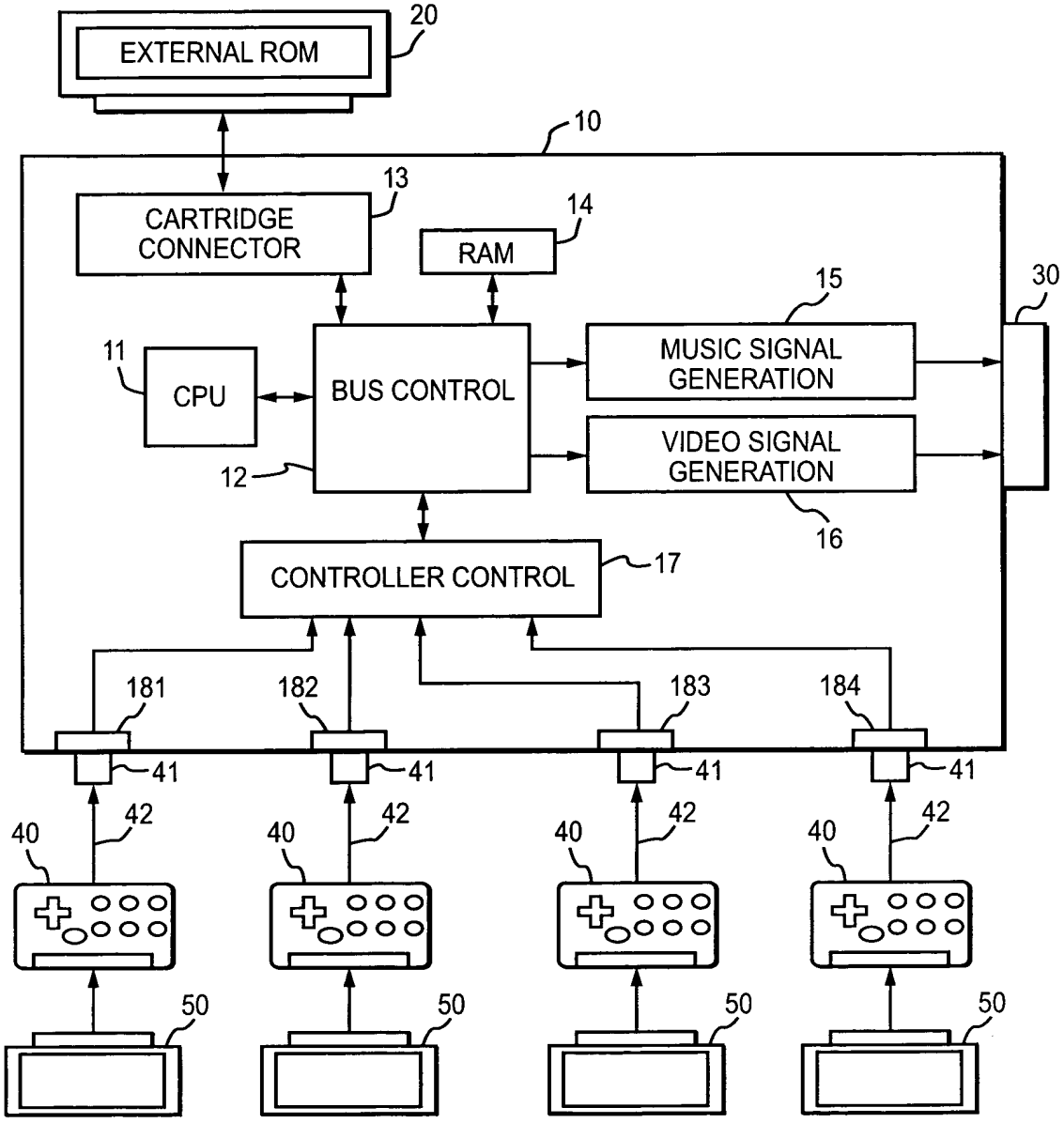

EXTERNAL ROM
20
10
CARTRIDGE CONNECTOR
13
RAM
14
15
30
11
CPU
BUS CONTROL
MUSIC SIGNAL GENERATION
VIDEO SIGNAL GENERATION
12
16
CONTROLLER CONTROL
17
181
182
183
184
41
42
40
50

Fig. 3

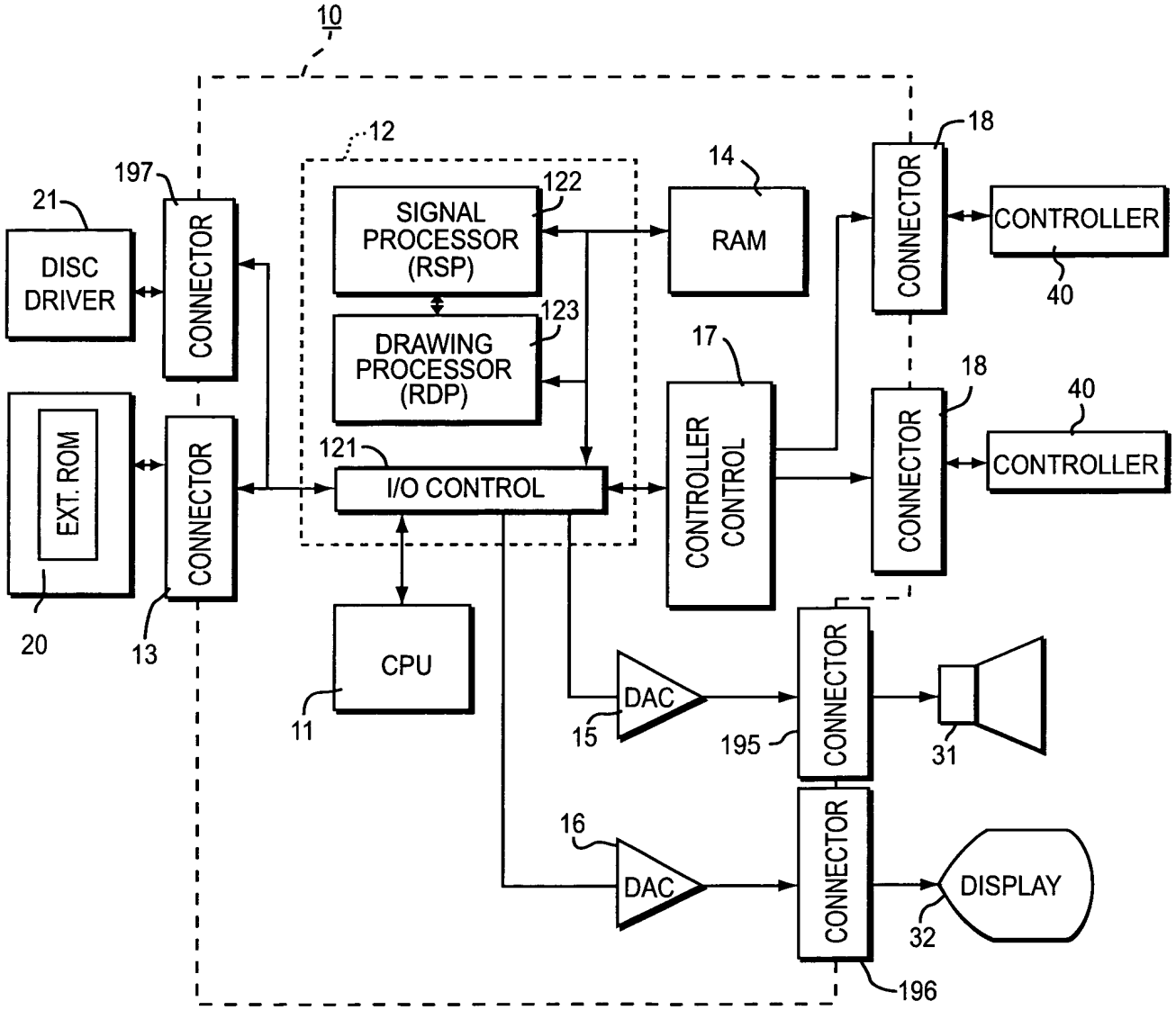

10
12
197
21
DISC DRIVER
CONNECTOR
SIGNAL PROCESSOR (RSP)
122
14
RAM
18
CONNECTOR
CONTROLLER
40
123
DRAWING PROCESSOR (RDP)
17
EXT. ROM
20
CONNECTOR
13
121
I/O CONTROL
CONTROLLER CONTROL
18
CONNECTOR
40
CONTROLLER
CPU
11
DAC
15
195
CONNECTOR
31
16
DAC
CONNECTOR
DISPLAY
32
196

Fig. 4

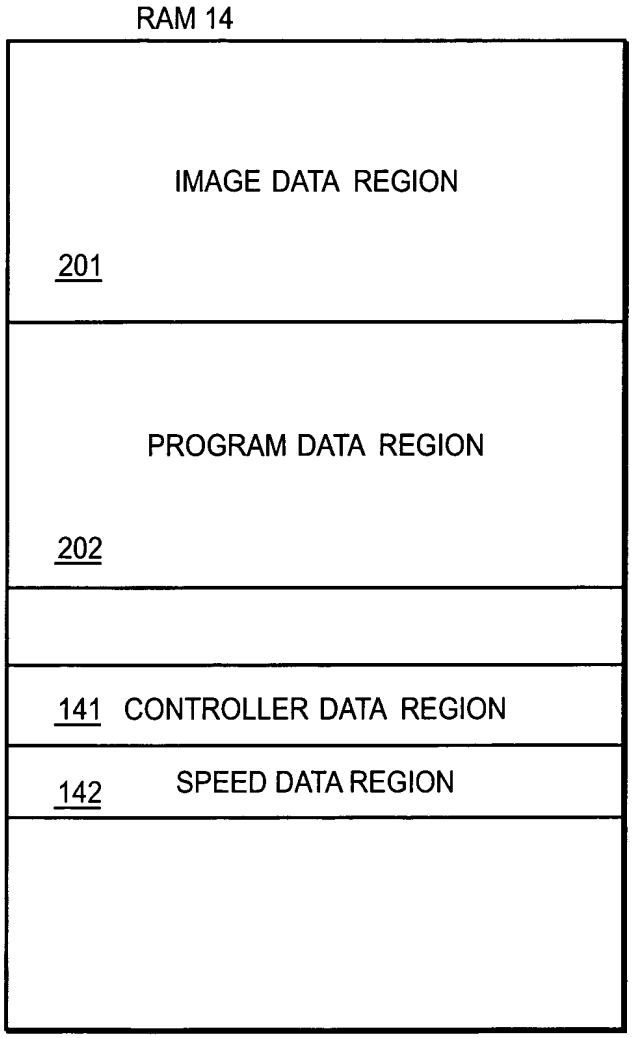

RAM 14
IMAGE DATA REGION
201
PROGRAM DATA REGION
202
141 CONTROLLER DATA REGION
142 SPEED DATA REGION

Fig. 5

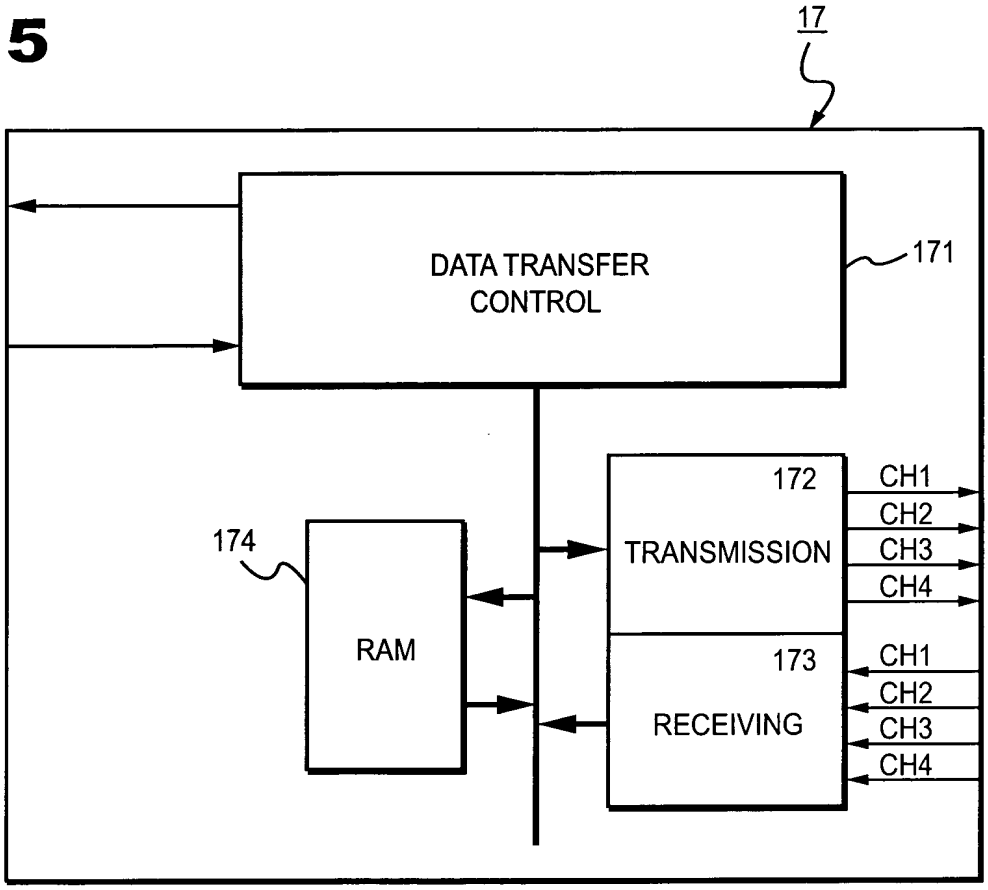

17
DATA TRANSFER CONTROL
171
172
TRANSMISSION
CH1
CH2
CH3
CH4
174
RAM
173
RECEIVING
CH1
CH2
CH3
CH4

Fig. 6

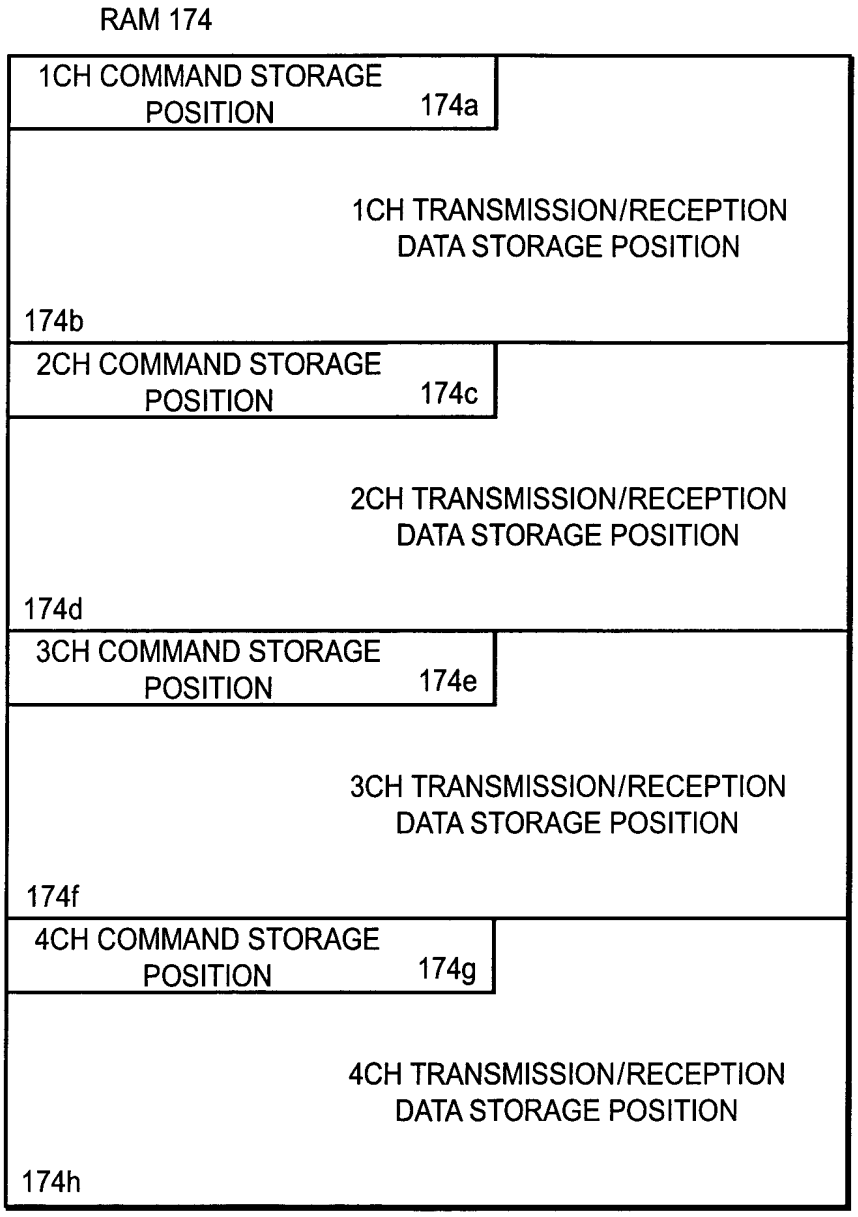

RAM 174
1CH COMMAND STORAGE POSITION
174a
1CH TRANSMISSION/RECEPTION DATA STORAGE POSITION
174b
2CH COMMAND STORAGE POSITION
174c
2CH TRANSMISSION/RECEPTION DATA STORAGE POSITION
174d
3CH COMMAND STORAGE POSITION
174e
3CH TRANSMISSION/RECEPTION DATA STORAGE POSITION
174f
4CH COMMAND STORAGE POSITION
174g
4CH TRANSMISSION/RECEPTION DATA STORAGE POSITION
174h

Fig. 7

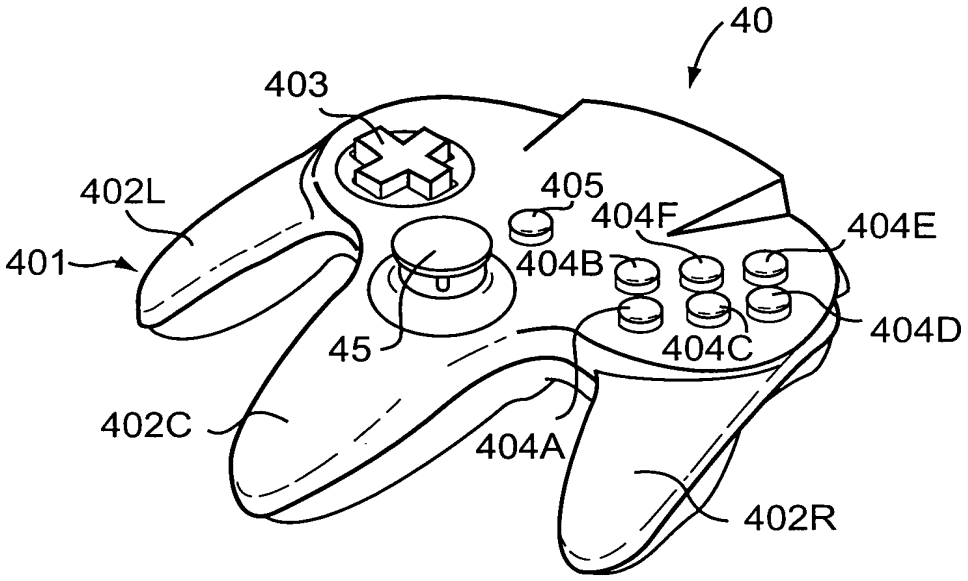

40
403
402L
405
404F
404E
401
404B
45
404C
404D
402C
404A
402R

Fig. 8

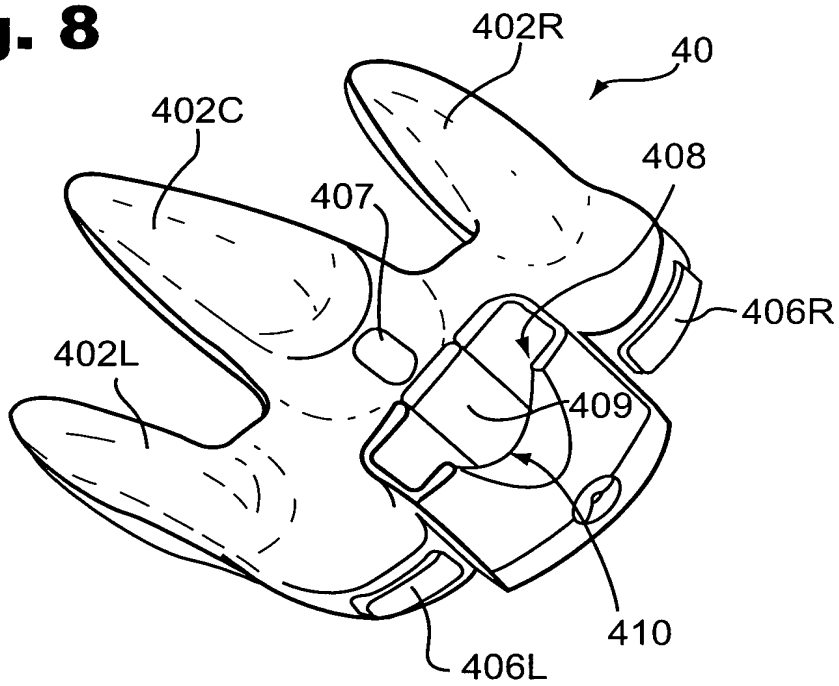

402R
40
402C
408
407
406R
402L
409
410
406L

Fig. 9

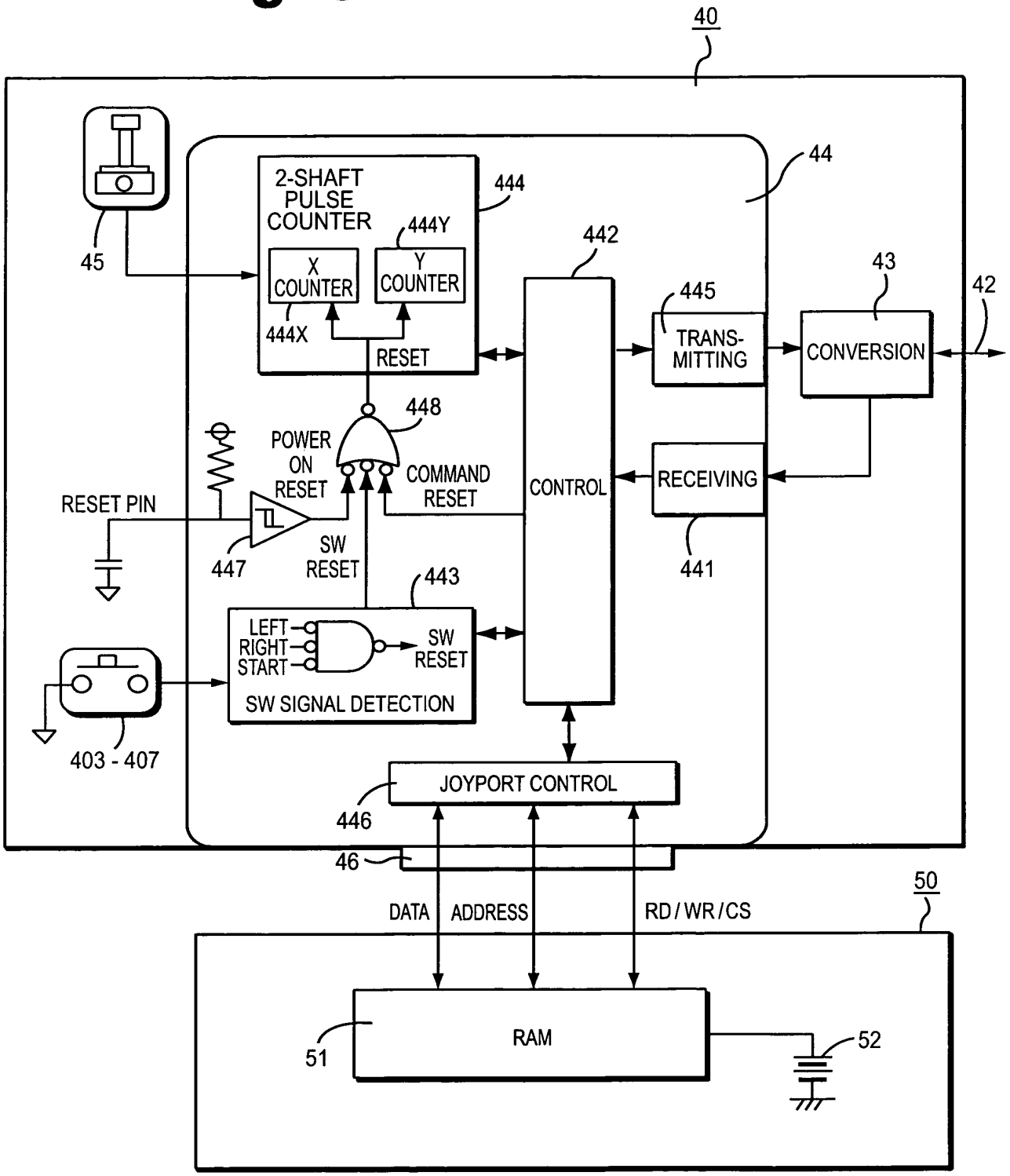

40
44
45
2-SHAFT PULSE COUNTER
444
444Y
X COUNTER
Y COUNTER
444X
RESET
442
43
42
445
TRANS-MITTING
CONVERSION
448
POWER ON RESET
COMMAND RESET
CONTROL
RECEIVING
RESET PIN
447
SW RESET
441
443
LEFT
RIGHT
START
SW RESET
SW SIGNAL DETECTION
403 - 407
JOYPORT CONTROL
446
46
50
DATA
ADDRESS
RD / WR / CS
RAM
51
52

Fig. 10

1 BYTE	B	A	G	START	↑	↓	←	→
2 BYTE	JSRST	O	L	R	E	D	C	F
3 BYTE	← X ORDINATE →							
4 BYTE	← Y ORDINATE →							

Fig. 11

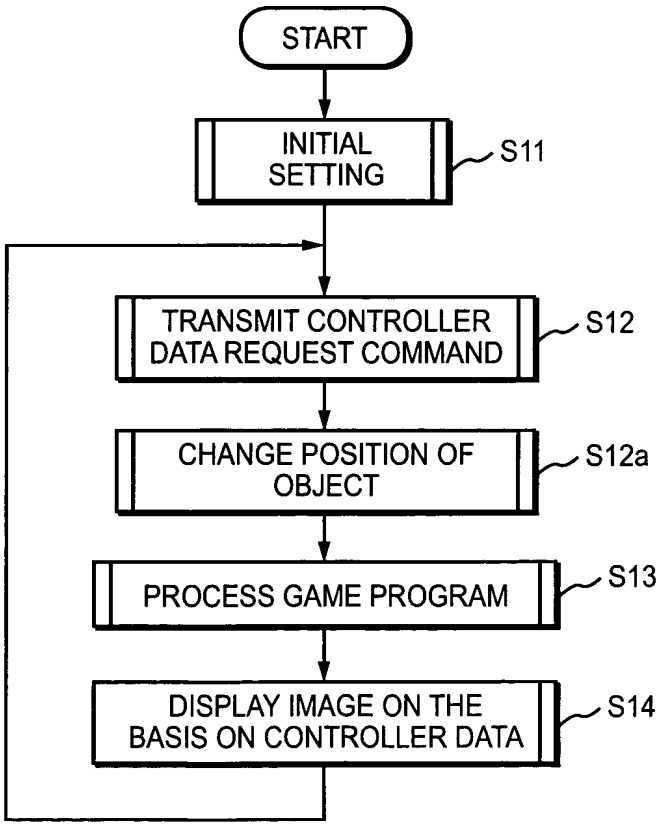


Fig. 12

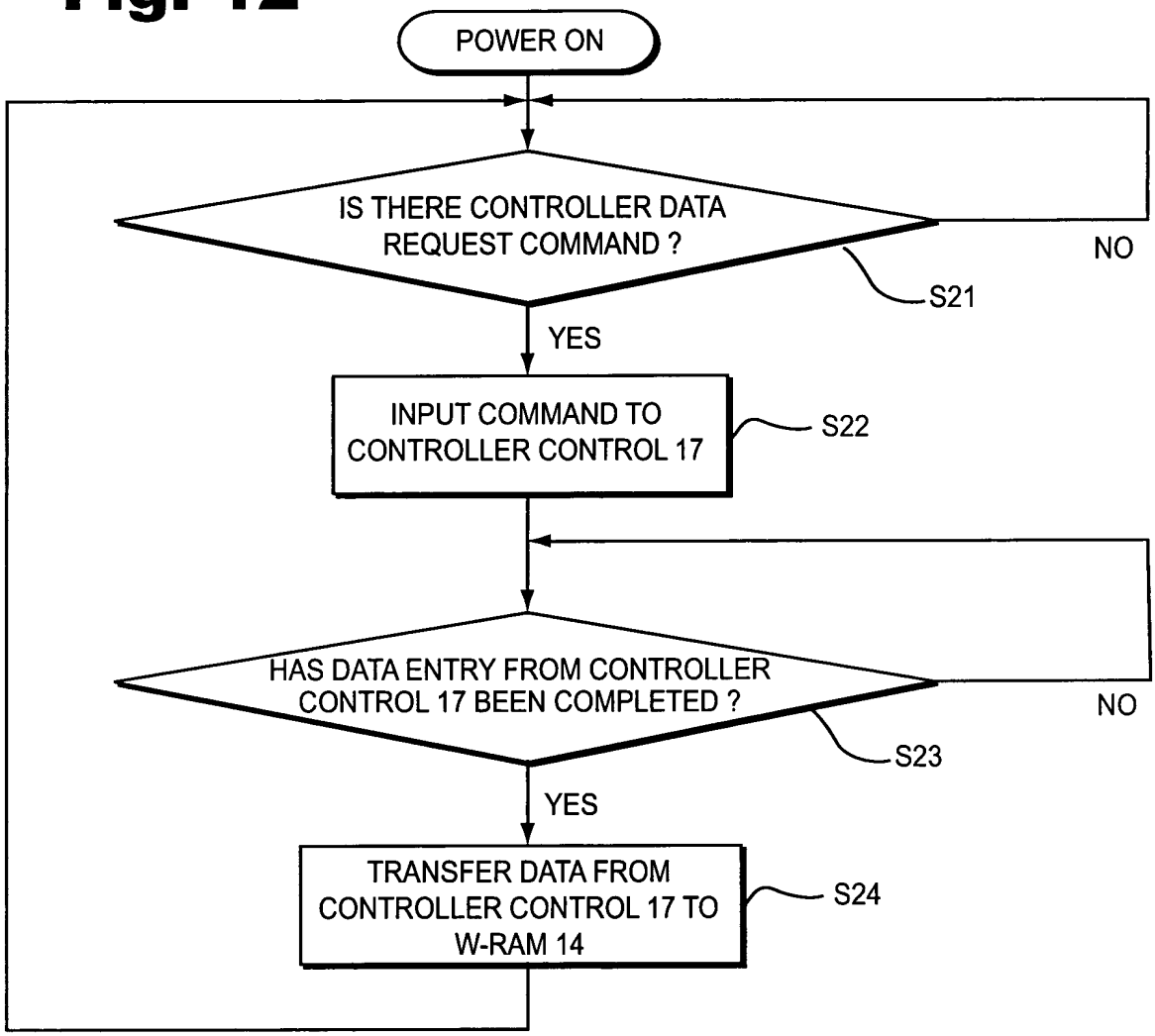

POWER ON
IS THERE CONTROLLER DATA REQUEST COMMAND ?
NO
S21
YES
INPUT COMMAND TO CONTROLLER CONTROL 17
S22
HAS DATA ENTRY FROM CONTROLLER CONTROL 17 BEEN COMPLETED ?
NO
S23
YES
TRANSFER DATA FROM CONTROLLER CONTROL 17 TO W-RAM 14
S24

Fig. 13

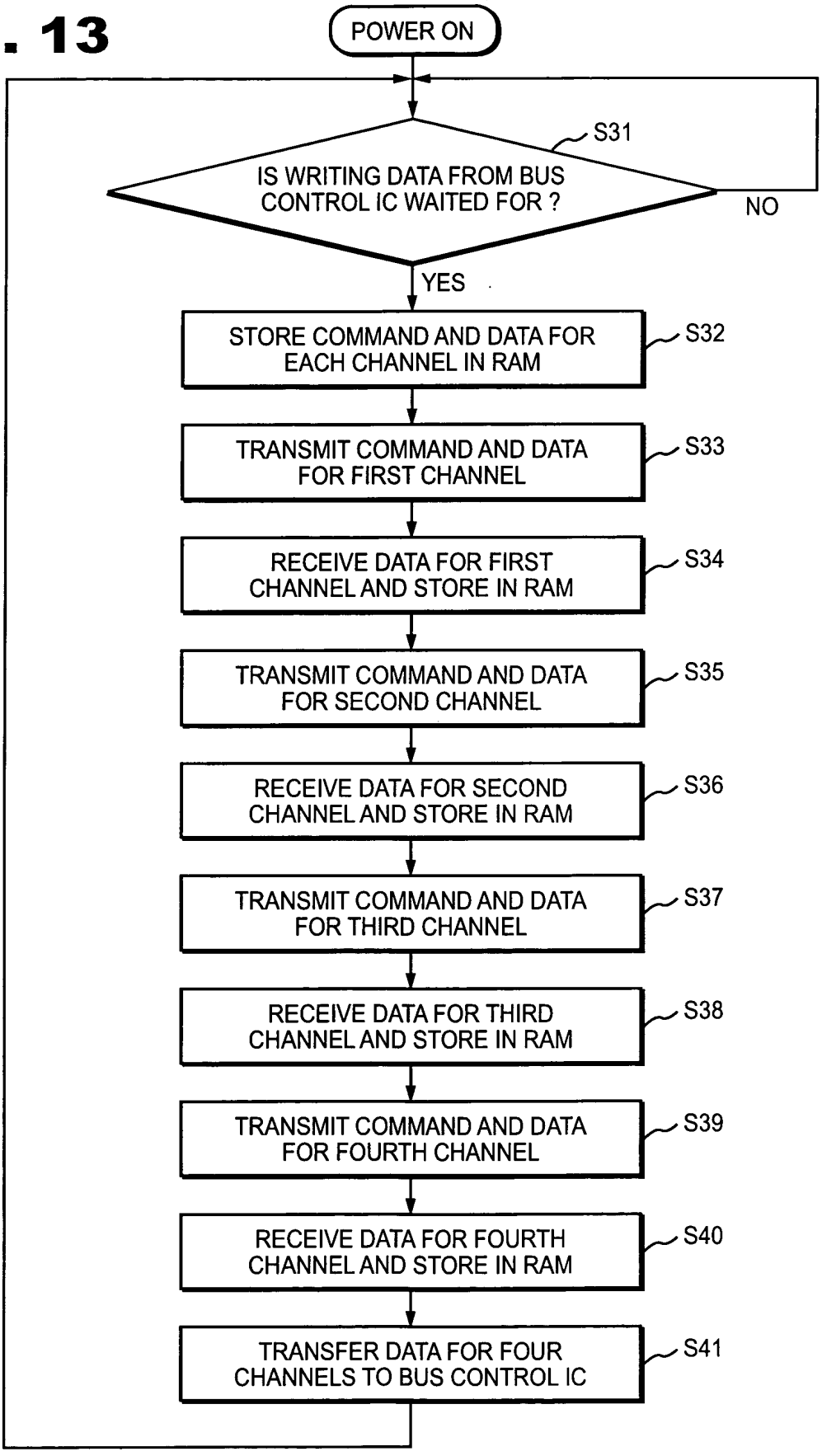

POWER ON
S31
IS WRITING DATA FROM BUS CONTROL IC WAITED FOR ?
NO
YES
STORE COMMAND AND DATA FOR EACH CHANNEL IN RAM
S32
TRANSMIT COMMAND AND DATA FOR FIRST CHANNEL
S33
RECEIVE DATA FOR FIRST CHANNEL AND STORE IN RAM
S34
TRANSMIT COMMAND AND DATA FOR SECOND CHANNEL
S35
RECEIVE DATA FOR SECOND CHANNEL AND STORE IN RAM
S36
TRANSMIT COMMAND AND DATA FOR THIRD CHANNEL
S37
RECEIVE DATA FOR THIRD CHANNEL AND STORE IN RAM
S38
TRANSMIT COMMAND AND DATA FOR FOURTH CHANNEL
S39
RECEIVE DATA FOR FOURTH CHANNEL AND STORE IN RAM
S40
TRANSFER DATA FOR FOUR CHANNELS TO BUS CONTROL IC
S41

Fig. 14

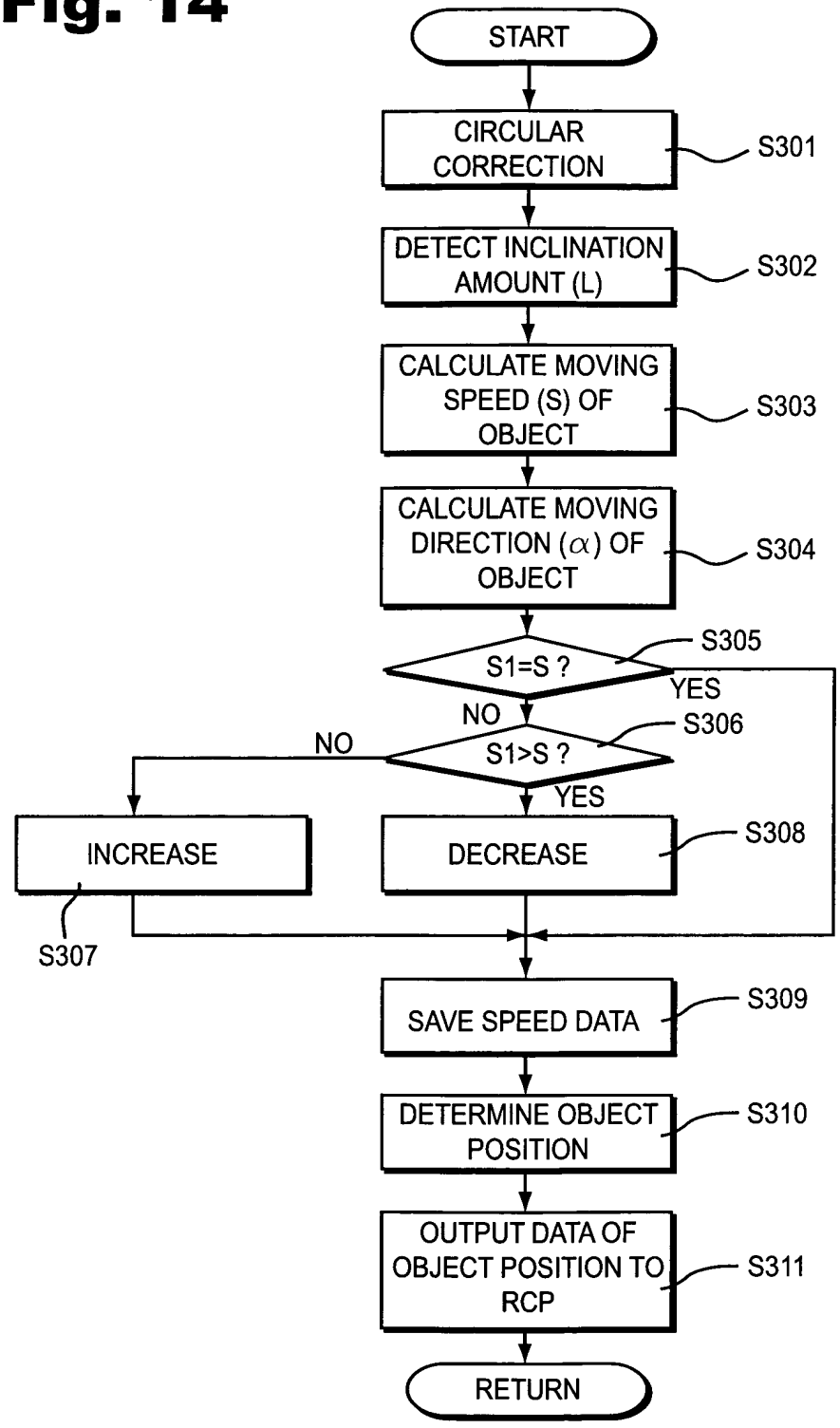

START
CIRCULAR CORRECTION
S301
DETECT INCLINATION AMOUNT (L)
S302
CALCULATE MOVING SPEED (S) OF OBJECT
S303
CALCULATE MOVING DIRECTION (α) OF OBJECT
S304
S1=S ?
S305
YES
NO
S1>S ?
S306
NO
YES
INCREASE
DECREASE
S308
S307
SAVE SPEED DATA
S309
DETERMINE OBJECT POSITION
S310
OUTPUT DATA OF OBJECT POSITION TO RCP
S311
RETURN

Fig. 15

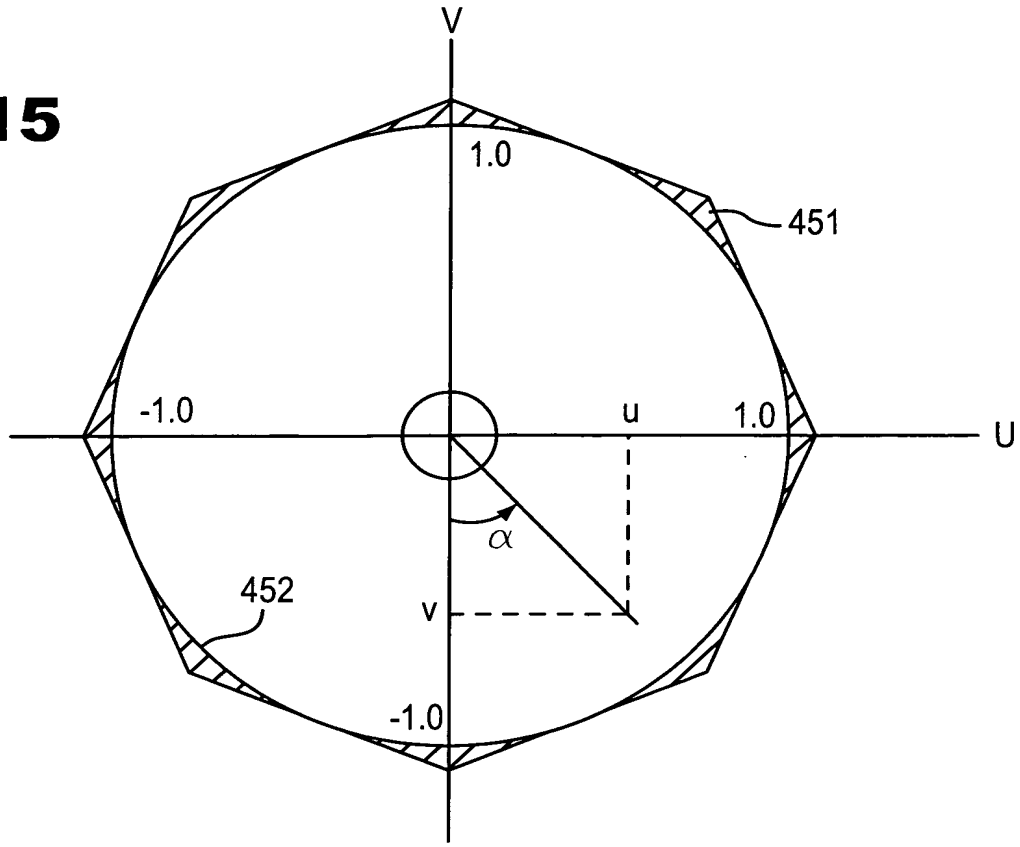
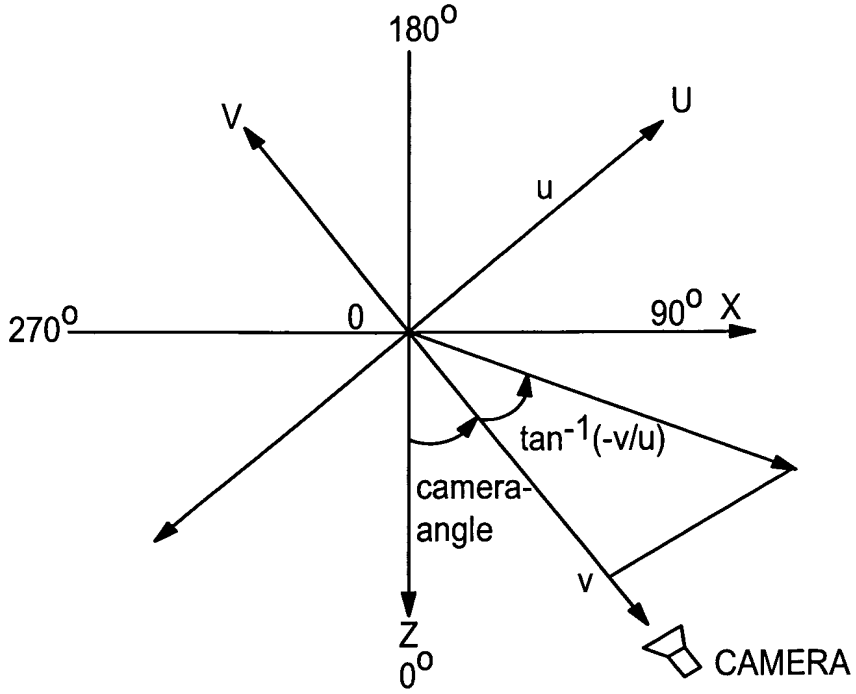

V
1.0
451
-1.0
u
1.0
U
α
452
v
-1.0

Fig. 16


180°
V
U
u
270°
0
90° X
tan-1(-v/u)
camera-
angle
v
Z
0°
CAMERA